

CLAIMS

I claim:

5 1. A collapsible grappling hook comprising:
 a shaft having a longitudinal axis;
 a head operatively connected to a first end of the shaft;
 at least one arm pivotally connected to the head such that the arm is moveable
 between a first closed position and a second open position; and
10 a hub rotatable about the axis, the hub having a locked position, wherein the hub
 confronts the arm to prevent pivoting of the arm between the open and closed positions, and
 an unlocked position, wherein the arm is pivotable between the open and closed positions.

15 2. The grappling hook of claim 1, wherein the head includes a pin and the arm includes
 an aperture, wherein the pin passes through the aperture to pivotally connect the arm to the
 head.

3. The grappling hook of claim 1, wherein a second end of the shaft is configured to be
 connected to a cable.

20 4. The grappling hook of claim 1, wherein the hub has a bottom surface, which
 confronts the arm when the hub is in locked position.

25 5. The grappling hook of claim 1, wherein the hub includes at least one grip adapted to
 be gripped by the fingers of an operator.

30 6. The grappling hook of claim 1, wherein the hub includes at least one member
 extending radially from the axis such that the member is aligned with the arm when the hub
 is in the locked position.

7. The grappling hook of claim 6, wherein the member and the arm are angulated about
 the axis when the hub is in the unlocked position.

8. The grappling hook of claim 1, wherein the arm is angulated with respect to the axis when the arm is in the open position.
- 5 9. The grappling hook of claim 1, wherein the arm is generally parallel to the axis when the arm is in the closed position.
10. 10. A collapsible grappling hook comprising:
 - a shaft having a longitudinal axis;
 - 10 a head operatively connected to a first end of the shaft, the head having at least one pin;
 - 15 at least one arm pivotally connected to the pin such that the arm is moveable between a first closed position and a second open position; and
 - a hub rotatable about the axis, the hub having a locked position, wherein the hub confronts the arm to prevent pivoting of the arm between the open and closed positions, and
 - 15 an unlocked position, wherein the arm is pivotable between the open and closed positions.
11. The grappling hook of claim 10, further comprising a connector connected to a second end of the shaft, wherein the connector is configured to receive a cable.
- 20 12. The grappling hook of claim 11, wherein the connector includes a cleat.
13. The grappling hook of claim 10, wherein the head further comprises a second pin, wherein the arm includes a curved slot in which the second pin slides.
- 25 14. The grappling hook of claim 10, wherein the head further comprises at least one stop which confronts the arm to prevent the arm from pivoting past the open position when the arm is moved from the closed position to the open position.
- 30 15. The grappling hook of claim 10, wherein the hub and the head have cooperating structure to maintain the head in either the locked or unlocked position.

16. The grappling hook of claim 10, wherein the hub has one of at least one resilient tab and at least one detent and the head has the other of at least one resilient tab and at least one detent, wherein the tab engages the detent to maintain the head in a predetermined angular position.

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17. The grappling hook of claim 16, wherein the hub comprises six detents and the head comprises three resilient tabs.

18. The grappling hook of claim 10, wherein the hub includes at least one member
10 extending radially from the axis such that the member is aligned with the arm when the hub is in the locked position.

19. The grappling hook of claim 10 comprising three arms.

15 20. The grappling hook of claim 18 comprising three arms and three members.

21. The grappling hook of claim 10 wherein the arm includes at least one tooth.

22. A collapsible grappling hook comprising:
20 a shaft having a longitudinal axis;
a head operatively connected to a first end of the shaft, the head having a plurality of first pins;
a plurality of arms, each arm pivotally connected to one of the first pins such that the arm is moveable between a first closed position and a second open position; and
25 a hub rotatable about the axis, the hub having a plurality of members extending radially from the axis, the hub having a locked position, wherein the members are aligned with the arms and confront the arms to prevent pivoting of the arms between the open and closed positions, and an unlocked position, wherein the members and the arms are angulated about the axis such that the arms are pivotable between the open and closed positions.

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23. The grappling hook of claim 22 comprising three arms.

24. The grappling hook of claim 22 comprising three members.
25. The grappling hook of claim 23 comprising three members.
- 5 26. The grappling hook of claim 22, wherein the arms are generally parallel to the axis when the arms are in the closed position.
27. The grappling hook of claim 22, wherein the arms are generally perpendicular to the axis when the arms are in the open position.
- 10 28. The grappling hook of claim 22, wherein the hub and the head have cooperating structure to maintain the head in either the locked or unlocked position.
- 15 29. The grappling hook of claim 22, wherein the hub has one of at least one resilient tab and at least one detent and the head has the other of at least one resilient tab and at least one detent, wherein the tab engages the detent to maintain the head in a predetermined angular position.
30. The grappling hook of claim 22, wherein the arm includes at least one tooth.
- 20 31. The grappling hook of claim 22, further comprising a connector connected to a second end of the shaft, wherein the connector is configured to receive a cable.
32. The grappling hook of claim 31, wherein the connector includes a cleat.
- 25 33. A method of opening and securing a collapsible grappling hook comprising the steps of:
 - providing a collapsible grappling hook comprising:
 - a shaft having a longitudinal axis;
 - 30 a head operatively connected to a first end of the shaft;
 - at least one arm pivotally connected to the head such that the arm is moveable between a first closed position and a second open position; and

a hub rotatable about the axis, the hub having a locked position, wherein the hub confronts the arm to prevent pivoting of the arm between the open and closed positions, and an unlocked position, wherein the arm is pivotable between the open and closed positions;

5 moving the hub into the unlocked position;
 pivoting the arm from the closed position to the open position; and
 moving the hub into the locked position to secure the arm in the open position.

34. A method of closing and securing a collapsible grappling hook comprising the steps
10 of:
 providing a collapsible grappling hook comprising:
 a shaft having a longitudinal axis;
 a head operatively connected to a first end of the shaft;
 at least one arm pivotally connected to the head such that the arm is moveable
15 between a first closed position and a second open position; and
 a hub rotatable about the axis, the hub having a locked position, wherein the hub confronts the arm to prevent pivoting of the arm between the open and closed positions, and an unlocked position, wherein the arm is pivotable between the open and closed positions;
20 moving the hub into the unlocked position;
 pivoting the arm from the open position to the closed position; and
 moving the hub into the locked position to secure the arm in the closed position.